

-- 3. A gas flow control device connected to a tubing for use in oil wells producing by continuous gas-lift, consisting of a housing and a nozzle mounted in said housing, said nozzle having a continuously open passage through which gas is allowed to flow, wherein said passage consists of a curved inlet portion through which gas flow is speeded up, a smooth straight intermediate portion providing a main restriction to gas flow and a smooth, outwardly tapered conical shaped outlet portion through which said gas flow is gradually slowed down, reducing the gas pressure loss throughout the valve approaching the ideal isentropic flow. --

REMARKS

Applicant wishes to thank the Examiner in charge of the above identified application for the interview courteously extended to the undersigned attorney on April 15, 1997.

In the Final Rejection, claim 2 was rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claim 2 was further rejected under 35 U.S.C. §103 as being unpatentable over Kerr. Claim 2 has been cancelled without prejudice in order to advance the prosecution of the present application and new claim 3 has been substituted therefor. Reconsideration and allowance of the application are respectfully requested in view of the following remarks.

New claim 3 is identical to the claim discussed during the interview and is directed to a gas flow control device connected to a tubing for use in oil wells producing by continuous gas-lift instead of a gas-lift valve having a valve seat. as called for in previous claim 2. It was indicated that the new claim would overcome the rejection under 35 U.S.C. §112, second paragraph as set forth in the Final

Rejection. However, no opinion was given with respect to the patentability of the claim over the prior art. The gas-lift control device as defined in new claim 3, is comprised of a housing and a nozzle mounted in the housing. The nozzle has a continuously open passage through which gas is allowed to flow wherein said passage consists of a curved inlet portion through which gas flow is speeded up, a smooth, straight, intermediate portion providing a main restriction to gas flow and a smooth, outwardly tapered, conical shaped outlet portion to which the gas flow is gradually slowed down.

The patent to Kerr deals with technical problems entirely different from that discussed in the present application. The patent to Kerr intends to prevent the escape of fluid in a passage formed by two pipe sections joined together and provided with an internal Venturi tube overlapping the joint to reduce the rate of heat exchange between the fluid in the passage and the material of the joint. The solution proposed in Kerr was to use a Venturi tube made of an insulating material to protect the joint and at the same time, to reduce sharp changes in the direction of flow of the fluid passing through the Venturi tube. Thus the patent to Kerr is directed to an entirely different type of device and the problem solved by Kerr has absolutely nothing to do with the problems of a gas-lift control device in an oil well producing by continuous gas lift. Furthermore, the configuration of the Venturi passage of Kerr does not have a smooth, straight, intermediate portion as called for in claim 3. Since Kerr is not even directed to the same type of device, it would not be the least bit obvious to one skilled in the art to even contemplate utilizing the Venturi of Kerr as a gas flow control device or to modify the construction of the Venturi of Kerr to meet the present invention.

Therefore it is respectfully requested that claim 3 be allowed and the application passed to issue forthwith.

If for any reason the Examiner is unable to allow the Application on the next Office Action and feels that a further interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

Filed concurrently herewith is a Petition and Fee Letter for a Two Month Extension of time and check in the amount of \$390.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account no. 19-4880.

Respectfully submitted,



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